

WHAT IS CLAIMED IS:

1 1. A system, comprising:
2 a transmitter including a power amplifier; and
3 a power controller adapted to receive a coupler value of a power level at said
4 output of said power amplifier if said power level is above a predetermined threshold
5 and perform a low power extrapolation if said power level is below a predetermined
6 threshold.

1 2. A system in accordance with claim 1, an output of said power controller
2 adapted to control a setting of said variable gain amplifier.

1 3. A method for use in a telecommunications transmitter, comprising:
2 initializing nominal transmit power, coupler, and transmit DAC values;
3 specifying a set power level;
4 setting a transmit DAC with said initial transmit DAC value;
5 determining an output of a power coupler;
6 comparing said output to a nominal value;
7 adjusting said transmit DAC such that said output matches said nominal
8 value; and
9 extrapolating past transmit DAC values to set said transmit DAC said set
10 power level is less than a predetermined threshold.

1 4. A method in accordance with claim 3, wherein said threshold defines a
2 linear region of a coupler vs. transmit power response.

1 5. A radio transmitter system, comprising:
2 a transmitter having a variable gain amplifier; and
3 means for adjusting a gain level of said variable gain amplifier based on a
4 coupler output value if said power measurement is greater than a predetermined
5 threshold.

1 6. A radio transmitter system in accordance with claim 5, said adjusting
2 means further comprising means for extrapolating a low power level.

1 7. A radio transmitter system in accordance with claim 6, said adjusting
2 means further including a slope calculation unit adapted to provide a power curve
3 value to said extrapolating means if a power measurement is less than said
4 predetermined threshold.

1 8. A system, comprising:
2 a transmitter including a power amplifier; and
3 a power controller adapted to adjust a power level based on a low power
4 extrapolation of a power measurement if said power level is below a predetermined
5 threshold.

1 9. A system in accordance with claim 8, said power controller further
2 adapted to adjust a set power value based on an output of said power adjustment
3 unit.

1 10. A system in accordance with claim 19, wherein said low power
2 extrapolation is derived from a past values on a power curve.

1 11. A system comprising:
2 a transmitter including a power amplifier;
3 a level detector adapted to determine a power level with respect to a
4 threshold; and
5 a power controller adapted to adjust a power level based on a low power
6 extrapolation of a coupler output if said power level is below said threshold.

1 12. A system in accordance with claim 11, wherein said power controller is
2 adapted to adjust a gain level of a power amplifier.

1 13. A system in accordance with claim 12, wherein determining said

2 extrapolation comprises determining a value of an output power curve using past
3 measured values of said output power.

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- 1 . 14. A telecommunications device, comprising:
 - 2 a transmitter including a power amplifier controlled via a transmit DAC;
 - 3 a level detector adapted to determine a power level with respect to a
 - 4 threshold;
 - 5 a power controller adapted to adjust a value of said transmit DAC based on a
 - 6 low power extrapolation of a coupler output if said power level is below said
 - 7 threshold; and
 - 8 wherein said power controller is adapted to adjust a value of said transmit
 - 9 DAC based on said output of said power coupler if said set power level is above said
 - 10 threshold.

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